SPNP - DIRECT NONRECURRING COSTS
MICHIGAN

A Work Group Per DID		B Activity	C Installation/ Removal Estimate (Hrs)	D 1997 Labor Rate Per Hour	E=C*D Total Installation/ Removal Expense
1) Business Unit (per order)	a	Log Order	0.083	$32.12	$2.68
- for VG and DS1 w/ and w/o transport	b	Pull CSR, Verify Request	0.167	$32.12	$5.35
(A/C = M236X Wisc only)	c	Call Business Office to issue C order	0.042	$32.12	$1.34
	d	Input into Ordermate	0.167	$32.12	$5.35
	e	Issue SPS order for NAC	0.167	$32.12	$5.35
	f	Contact CTG for info	0.083	$32.12	$2.68
	g	Retrieve Order & Account #'s	0.083	$32.12	$2.68
	h	Input into Ordermate	0.167	$32.12	$5.35
	i	Issue SPS for CTG & NAC	0.250	$32.12	$8.03
	j	Machine cost			$3.75
location life = 1 year	k	Disconnect Order PV=11.5%COM	0.250	$33.47	$7.50
	l	Machine cost PV=11.5%COM			$3.36
	m	Total			$53.42
2) Business Office (per order)	a	Type Order	0.250	$40.36	$10.09
(A/C = M236X)	b	Contact Time	0.167	$40.36	$6.73
	c	Issue Order	0.250	$40.36	$10.09
	d	Machine cost			$3.75
	e	Total			$30.66
3) Unbundling Center (per trunk)	a	Pre-service Set-up	0.250	$41.32	$10.33
(A/C = P475X Wisc only)	b	Verify and Release Order	0.167	$41.32	$6.89
	c	Reverify and Close Order	0.083	$41.32	$3.44
	d	Disconnect Order PV=11.5%COM	0.083	$43.05	$3.22
	e	Total			$23.88
4) Centralized Translations Group (CTG)	a	Build Route Index per Trunk Group	0.333	$43.65	$14.54
(A/C = P430X)	b	Disconnect Order PV=11.5%COM	0.167	$45.48	$6.81
	c	Total			$21.35
	d	Assign Trunk Members per Trunk	0.167	$43.65	$7.29
	e	Disconnect Order PV=11.5%COM	0.083	$45.48	$3.39
	f	Total			$10.68
5) Recent Change Memory Admin. Center	a	Assign Directory Numbers per No.	0.033	$43.65	$1.46
(RCMAC)	b	Rearrangement per line	0.025	$43.65	$1.09
(A/C = P430X)					
	c	Total			$2.55
6) Network Administration Center (NAC) (per number) (A/C = M270X)		Provide assignment	0.017	$40.75	$0.68
7) USOC Implementation (per Trunk Group)					$35.18
8) SERVICE ORDERING		(L1m + L2e)	$84.08		
9) TOTAL PER TRUNK GROUP		(L4c + L7)	$56.53		
10) TOTAL PER DS0 TRUNK TERMINATION		(L4f + L3e)	$34.56		
11) TOTAL PER DS1 TRUNK TERMINATION		((L4f *24) + L3e)	$280.20		
12) TOTAL PER NUMBER		(L5c + L6)	$3.23		
13) SUBSEQUENT CHANGES		L4c	$21.35		

Handwritten annotations:

8) = 53.42 + 30.66

9) = 21.35 + 35.18

10) = 10.68 + 23.88

11) = (10.68 x 24) + 23.88

12) = 2.55 + .68

14 Non Volume Sensitive Cost per Trunk Group = .25
15 "   "   "   "   "   "   DS0 Trunk Termination = .77
16 "   "   "   "   "   "   DS1 Trunk Termination = 6.81
17 "   "   "   "   "   "   Number
18   Subsequent Changes = .47

UNBUNDLED SERVICES

SPNP Remote	Monthly TELRIC	Shared Cost	Common Cost	Total Cost
Per Number Ported	$2.58	$0.47	$0.26	$3.31
Per Number Ported Inc'l. Add'l. Call Paths	$2.92	$0.53	$0.30	$3.75
Per Add'l. Call Path(1-5 Paths)	$0.08	$0.01	$0.01	$0.10
Per Add'l. Call Path(6-90 Paths)	$0.31	$0.06	$0.03	$0.40

	Non Recurring TELRIC			
Serv. Ordering-Per Occasion	$39.29	$7.10	$4.02	$50.41
Serv. Ordering-Per Subsequent Add'l. Call Path	$39.29	$7.10	$4.02	$50.41
Line Connection-Per # Ported	$20.19	$3.65	$2.06	$25.90
Line Connection-Per Subsequent Add'l. Call Path	$10.53	$1.90	$1.08	$13.51

SPNP Direct	Monthly TELRIC			
Per Voice Grade Channel Term.	$18.56	$3.35	$1.90	$23.81
Per DS-1 Channel Term.	$121.92	$22.02	$12.47	$156.41
Per Number Ported	$0.030724	$0.005550	$0.003143	$0.039417

	Non Recurring TELRIC			
Service Order-Per Occasion	$39.29	$7.10	$4.02	$50.41
Service Rearrangement	$21.82	$3.94	$2.23	$27.99
Per Voice Grade Channel Termination	$35.33	$6.38	$3.61	$45.32
Per DS-1 Channel Termination	$286.41	$51.74	$29.30	$367.45
Per Number Ported	$3.30	$0.60	$0.34	$4.24
Per Trunk Group	$57.78	$10.44	$5.91	$74.13

RECURRING COST SUMMARY
AMERITECH - MICHIGAN
SERVICE-PROVIDER NUMBER PORTABILITY (SPNP) SERVICE
REMOTE

		a	b	c	
		5ESS	DMS	EWSD	
1a	Investment per Number Ported (RCF)	*BELLCORE CONFIDENTIAL*			
1b	Annual Charge Factor	0.3509	0.3716	0.4063	
1c	Monthly Cost Per Number Ported	*BELLCORE CONFIDENTIAL*			
2	Technology Weighting	0.3312	0.5722	0.0966	
3	Monthly Cost Per Number Ported - RCF Feature		$1.09		
4	Intraswitch Cost Per Call		$.007271		
5	Interswitch Cost Per Call		$.012721		
6	Cost Per Call		$.009178		(L4 * .65) + (L5 * .35)
7	Average Number of Calls Per Month		150		
8	Monthly Call Cost Per Number Ported		$1.38		L6 * L7
9	Monthly Cost of Intercept		$0.02		
10	Monthly Cost of Telephone Number		$0.01		
11	Monthly Cost Per Number Ported - USOC Implementation		$0.01		
12a	Monthly VS Cost Per Number Ported		$2.52		L3+L8+L9+L10+L11
12b	Non Volume Sensitive Direct Cost		$0.06		

		a	b	c
		5ESS	DMS	EWSD
13a	Investment per Additional Path (SFG)	*BELLCORE CONFIDENTIAL*		
13b	Annual Charge Factor	0.3509	0.3716	0.4063
13c	Monthly Cost Per Additional Path	*BELLCORE CONFIDENTIAL*		
14	Technology Weighting	0.3312	0.5722	0.0966
15a	Monthly VS Cost Per Additional Path		$0.08	
15b	Non Volume Sensitive Direct Cost		$0.00	

BELLCORE CONFIDENTIAL

16. Monthly Cost Per Ported Number Incl. Add'l. Call Paths =
    2.52 + 2.5 ((.03 x .75) + (.30 x .25)) = $2.86
17. Non Volume Sensitive Cost = .06

RECURRING COST SUMMARY
AMERITECH - MICHIGAN
SERVICE.PROVIDER NUMBER PORTABILITY (SPNP) SERVICE
REMOTE

Cost Per Additional Path (6 - 90)

		a 5ESS	b DMS	c EWSD	Source
1	Local Switch Trunk Term EF&I Invest by Technology	BELLCORE CONFIDENTIAL			
2a	Annual Capital Cost Factor	0.2641	0.2797	0.3059	
2b	Switch Trunk Termination Annual Capital Cost	BELLCORE CONFIDENTIAL.			
3	Technology Weighting	0.3312	0.5722	0.0966	
4	Weighted Annual Capital Cost per Local Trunk Term	$21.83			
4a	Frequency of Local Trunk Occurrence	0.70			2°.35(intersw)
4b	Annual Cost of Local Trunk Termination	$15.28			L4*L4a
5	Tand Switch Trunk Term EF&I Invest by Technology	BELLCORE CONFIDENTIAL			
6a	Annual Capital Cost Factor		0.2797		
6b	Switch Trunk Termination Annual Capital Cost	BELLCORE CONFIDENTIAL			
7	Technology Weighting	0.0	1.0000	0.0	
8	Weighted Annual Cost per Tand Trunk Termination	$26.23			
9	Frequency of Tandem Trunk Occurrence	0.70			2°.35(intersw)
10	Annual Cost of Tandem Trunk Termination	$18.36			L8*L9
11	Total Trunk Termination Annual Capital Cost	$33.64			L4b+L10
11a	Fill Adjustment Factor	1.0889			98% / 90%
11b	Fill Adjusted Trunk Term Annual Capital Cost	$36.63			L11*L11a
12	NPV Factor - 4yrs to Service Life	2.46907			
13	Present Worth of Capital Costs	$90.45			L11b*L12
14	Factor to Annuitize PW Capital Costs - 3yrs,11.5%	0.37020			
15	Annual Cost per Trunk Termination	$33.48			L13*L14
16	Number of Paths per Trunk Termination	12.70			
17	Annual Cost per Additional Path for Trunk Term	$2.64			L15/L16
18	Monthly Cost per Additional Path	$0.22			L17/12
19	Monthly Cost per Additional Path for Sw Processor	$0.08			
20a	Total VS Monthly Cost per Additional Path (6 - 90)	$0.30			L18+L19
20b	Non Volume Sensitive Direct Cost	$0.01			

BELLCORE CONFIDENTIAL

AMERITECH - MICHIGAN
SERVICE PROVIDER NUMBER PORTABILITY (SPNP) SERVICE
REMOTE

Usage Cost Calculations

	Description	Per Message	Source
	Intraswitch Call		
	Setup		
1	End Office (EO) IAO	$ 0.000794	
2	Measurement (AMA)	$ 0.000118	
3	Cust. Serv. Expense	$ 0.001695	
4	Total Setup	$ 0.002607	SUM(L1...L3)
	Duration		
5	EO - IAO per Min.	$ 0.001422	
6	Avg. Minutes per Message	3.280	
7	Total Message Duration	$ 0.004664	L5*L6
8	Total Cost per Message	$ 0.007271	L4+L7
	Interswitch Call		
	Setup		
9	Total Setup	$ 0.003198	
10	Cust. Ser. Expense	$ 0.001695	
11	Total Setup	$ 0.004893	SUM(L9...L10)
	Duration		
12	Total Duration Cost/Minute	$ 0.002386	
13	Average Minutes per Message	3.280	
14	Total Message Duration	$ 0.007827	L0*L12
15	Total Cost per Message	$ 0.012721	L11+L14

NONRECURRING COST SUMMARY

AMERITECH - MICHIGAN

SERVICE PROVIDER NUMBER PORTABILITY (SPNP) SERVICE

REMOTE

USOC Implementation Cost

1	USOC Implementation Hours		
	a - Programming and Development	230	Network Services
	b - Operational Systems	58	Network Services
2	Labor Rates - 1996		
	a - SG3	$56.17	ACAR
3	USOC Implementation Expense	$16,176.96	(L1a * L2a) + (L1b * L2a)
4	Expense per Number Ported per Month	$0.01	L3 / 103,647 / 12

WEIGHTED UNBUNDLED SERVICES SERVICE ORDER COST

	% a	MICH COST b	MICH wtd cost a x b
LOOP	37%	11.35	4.1995
PORT	5%	12.34	0.617
SPNP DIRECT	6%	84.08	5.0448
SPNP REMOTE	50%	56.67	28.335
ADD'L. PATH	2%	12.36	0.2472

$38.44

Non Volume Sensitive NRC .38

SPNP - REMOTE NONRECURRING COSTS
MICHIGAN

A Work Group Per # Ported		B Activity	C Installation/ Removal Time Estimate (Hrs)	D 1997 Labor Rate Per Hour	E=C*D Total Installation Removal Exp	
1) Business Unit (per order)	a	Log Order	0.083	$32.12	$2.68	
(A/C = M236X Wisc only)	b	Pull CSR, Verify Request	0.167	$32.12	$5.35	
	c	Call Business Office to issue C order	0.042	$32.12	$1.34	
	d	Input into Ordermate	0.167	$32.12	$5.35	
	e	Machine cost			$4.33	
location life = 1 year	f	Disconnect Order PV=11.5%COM	0.083	$33.47	$2.50	
	g	Machine cost PV=11.5%COM			$3.88	
	h	Total				$25.43
2) Business Office (per order)	a	Type Order	0.250	$40.36	$10.09	
(A/C = M236X)	b	Contact Time	0.167	$40.36	$6.73	
	c	Issue Order	0.250	$40.36	$10.09	
	e	Machine cost			$4.33	
	f	Total				$31.24
3) Unbundling Center (per # ported)	a	Pre-service Set-up	0.271	$41.32	$11.19	
(A/C = P475X Wisc only)	b	Verify and Release Order				
	c	Reverify and Close Order				
	d	Disconnect Order PV=11.5%COM	0.083	$43.05	$3.22	
	e	Total				$14.41
4) Recent Change Memory Admin. Ctr	a	Input Translations per # ported	0.083	$43.65	$3.64	
(RCMAC)	b	Rearrangement per line	0.025	$43.65	$1.09	
(A/C = P430X)	c	Total				$4.73
5) Network Administartion Center (NAC)		Number Assignment	0.015	$40.75	$0.61	
(A/C = M270X)						

5A) Line Connection Non Volume Sensitive Cost   .44
Per Additional Path-Subsequent

6) Business Unit (per order)		Log and Input Order	0.250	$32.12	$8.03	
(A/C = M236X Wisc only)		Machine cost			$4.33	$12.36
7) Unbundling Center (per additional path)	a	Pre-service set-up, Release and Closure	0.083	$41.32	$3.44	
(A/C = P475X Wisc only)	b	Disconnect Order PV=11.5%COM	0.083	$43.05	$3.22	
	c	Total				$6.66
8) Recent Change Memory Admin. Ctr		Input Translations	0.083	$43.65	$3.64	
(RCMAC) (per additional path)						

5A) Line Connection Non Volume Sensitive Cost   .23

9) TOTAL NRC PER NUMBER PORTED
a) - Service Ordering - per order $56.67   = 25.43 + 31.24
b) - Line Connection - per # ported $19.75   = 14.41 + 4.73

10) TOTAL NRC PER ADDITIONAL PATH
a) - Service Ordering - per order $12.36   = 12.36
b) - Line Connection - per additional path $10.30   = 6.66 + 3.64
(subsequent)

UNIT COST SUMMARY

AMERITECH - MICHIGAN

SERVICE PROVIDER NUMBER PORTABILITY (SPNP) SERVICE

DIRECT

Non Volume Service

1	Monthly Cost Per Voice Grade Channel Termination - Central Office	$4.97		
2	Monthly Cost Per Voice Grade Channel Termination - D4	$13.19		
3	Monthly Cost Per Voice Grade Channel Termination	$18.16	L1 + L2 ·· .40	
4	Monthly Cost Per DS1 Channel Termination	$119.28	L1 * 24 2.54	
5	Monthly Cost Per Number Ported	$0.0000581		
6	Monthly Cost Per Telephone Number and Intercept	$0.03		
7	Total Monthly Cost Per Ported Number	$0.0300581	L5 + L6 .000444	

AMERITECH - MICHIGAN
DIRECT INWARD DIALING
MONTHLY COST PER TRUNK
TERMINATION

INVESTMENT PER
TRUNK TERM

5ESS	*BELLCORE*
DMS-100	
EWSD	*CONFIDENTIAL*

ANNUAL COST
FACTORS - 377C

5ESS	0.3509
DMS-100	0.3716
EWSD	0.4063

COST PER
TRUNK TERM

5ESS	
	BELLCORE
DMS-100	
	CONFIDENTIAL
EWSD	

WEIGHTINGS

5ESS	33.12%
DMS-100	57.22%
EWSD	9.66%
TOTAL	100.00%

ANNUAL
WEIGHTED COST
PER TRUNK TERM $59.60

MONTHLY
WEIGHTED COST
PER TRUNK TERM $4.97

AMERITECH - MICHIGAN
DIRECT INWARD DIALING
MONTHLY COST D4 CHANNEL BANK PER DSO

INVESTMENT D4 CHANNEL BANK
PER DSO

$321.76

ANNUAL COST FACTOR
357C

0.3137

ANNUAL COST
D4 CHANNEL BANK
PER DSO

$100.94

MONTHLY COST
D4 CHANNEL BANK
PER DSO

$8.41

INVESTMENT D4 PLUG-IN UNIT
PER DSO

$182.77

ANNUAL COST FACTOR
357C

0.3137

ANNUAL COST
D4 PLUG-IN UNIT
PER DSO

$57.33

MONTHLY COST
D4 PLUG-IN UNIT
PER DSO

$4.78

INVESTMENT & COST PER DN
5ESS

BELLCORE

INVESTMENT & COST PER DN
EWSD

CONFIDENTIAL

INVESTMENT PER DN
DMS-100

ANNUAL COST FACTOR
377C - DMS-100   .37160

MONTHLY COST PER DN - DMS-100 $0.0001016

WEIGHTINGS

5ESS	33.12%
EWSD	9.66%
DMS-100	57.22%

TOTAL

MONTHLY
WEIGHTED COST PER DN $0.0000581

AMERITECH MICHIGAN

UNBUNDLED LOOP
COST OF A TELEPHONE NUMBER

LINE	DESCRIPTION		
1	NETWORK ADMINISTRATION HOURS - INSTALL		1
2	CENTRAL OFFICE ACTIVITY HOURS - INSTALL		44
3	CIRCUIT FACILITIES HOURS - INSTALL		80
4	COSMOS DATABASE HOURS - INSTALL		3
5	NETWORK ADMINISTRATION HOURS - REMOVE		0.25
6	CENTRAL OFFICE ACTIVITY HOURS - REMOVE		10
7	CIRCUIT FACILITIES HOURS - REMOVE		20
8	COSMOS DATABASE HOURS - REMOVE		0.5
9	USABLE NUMBERS IN A PREFIX (FWD LOOKING)		10,000
10	C.O. LINE & NO. ADMIN. (96) M270X		39.19
11	C.O. TECHNICIAN (96) P430X		41.43
12	CIRCUIT FACILITIES (96) M270X		39.19
13	COSMOS DATABASE (96) P430X		41.43
14	PROGRAM STORE WORD INSTALLED INVEST.		0.0056
15	COST OF MONEY		0.136
16	ANNUAL COST FACTOR 377C (MEGA DMS)		0.4552
17	DISCOUNT RATE (MEGA DMS)		0.824
18	LABOR RATE INFLATION FACTOR		various

NONRECURRING COSTS .
_____ _____

19	NETWORK ADMINISTRATION COST - INSTALL	L1*L10	39.19
20	CENTRAL OFFICE ACTIVITY COSTS - INSTALL	L2*L11	1822.92
21	CIRCUIT FACILITIES COST - INSTALL	L3*L12	3135.20
22	COSMOS DATABASE COST - INSTALL	L4*L13	124.29
23	TOTAL LABOR COST - INSTALL	L19..L22	5121.60
24	LABOR INFLATION FACTOR FOR 7 YEARS		1.357
25	NETWORK ADMINISTRATION COST - REMOVE	L5*L10*L24	13.3
26	CENTRAL OFFICE ACTIVITY COST - REMOVE	L6*L11*L24	562.21
27	CIRCUIT FACILITIES COST - REMOVE	L7*L12*L24	1063.62
28	COSMOS DATABASE COST - REMOVE	L8*L13*L24	28.11
29	TOTAL LABOR COST - REMOVE (FUTURE AMT)	L25..L28	1667.24
30	PV of FUTURE AMT FACTOR (1,11.5%,7yr)		0.46674
31	PV OF REMOVAL COSTS	L30*L29	778.17
32	TOTAL LABOR COSTS	L23+L31	5899.77
33	NONRECURRING COST PER NUMBER	L32/L9	0.59

UNBUNDLED LOOP
COST OF A TELEPHONE NUMBER

LINE	DESCRIPTION		
34	NONRECURRING COST PER NUMBER (LABOR)	L33	0.59
35	USEFUL LIFE IN YEARS		7
36	ANNUITY FACTOR (PV 1,INT 11.5, TERM 7 YRS)		0.1774
37	ANNUAL RECURRING COST PER NUMBER (LABOR)	L34*L36	0.10467
38	ANN COST FOR PROG STORE WORD	L14	0.0056
39	ANN COST FOR PGM STORE WORD w/discount	L38*(1-L17)	0.00099
40	TOTAL ANNUAL COST PER NUMBER	L37+L39	0.10566
41	TOTAL MONTHLY COST PER NUMBER	L40/12	0.01

AMERITECH MICHIGAN

UNBUNDLED PORT
INTERCEPT COST SUMMARY

1.	OPERATOR ANNUAL WAGES AND EXPENSES		$257,423
2.	INTERCEPT TRUNK MILEAGE ANNUAL COST		$16,182
3.	INTERCEPT CXR TERMINATIONS ANNUAL COST		$663,735
4.	INTERCEPT COE SW ANNUAL COST		$252,812
5.	TOTAL INTERCEPT EXPENSE	L1+L2+L3+L4	$1,190,152
6.	TOTAL ACCESS LINES		4,890,240
7.	ANN INTERCEPT COST PER ACCESS LINE	L5/L6	$0.24
8.	MO. INTERCEPT COST PER ACCESS LINE	L7/12	$0.02

AMERITECH MICHIGAN

UNBUNDLED PORT
INTERCEPT OPERATOR SERVICES
WAGES & EXPENSES

A. 2140 INTERCEPT - OPERATORS $101,000

B. 2141 INTERCEPT - SUPERVISION AND ASSISTANCE $28,000

C. 2142 OPERATOR SERVICES CLERICAL - INTERCEPT $3,000

D. 2146 INTERCEPT OPERATOR REFERENCE SOURCE - MTCE. $109,000

E. 2147 INTERCEPT OPERATOR REFERENCE SOURCE -
   MAINTENANCE SUPERVISION AND ASSISTANCE $56,000

F. TOTAL INTERCEPT WAGES AND EXPENSES (A+..+E) $297,000

G. PERCENT ASSIGNED TO LOCAL   0.757354

H. TOTAL INTERCEPT WAGES & EXPENSES ASSIGNED
   TO LOCAL (1993)   F*G $224,934

F. TOTAL 1996 INTERCEPT EXPENSES-TPI   (H*1.144) $257,423

AMERITECH MICHIGAN

UNBUNDLED PORT
INTERCEPT TRUNK MILEAGE COST

1. AUTOMATIC INTERCEPT TRUNK MILES	ENGR STUDY	88,309
2. INVESTMENT PER MILE DS0 845C	FIC STUDY, L40	$0.16
3. INVESTMENT PER MILE DS0 4C	FIC STUDY, L41	0.09
4. INVESTMENT PER MILE DS0 85C	FIC STUDY, L42	0.18
5. INVESTMENT PER MILE DS0 357C	FIC STUDY, L45	0.52
6. ANNUAL COST FACTOR (ACF) 845C		0.1898
7. ANNUAL COST FACTOR (ACF) 4C		0.1447
8. ANNUAL COST FACTOR (ACF) 85C		0.1969
9. ANNUAL COST FACTOR (ACF) 357C		0.3137
10. ANNUAL COST OF INTERCEPT MILEAGE	SUM(Mi*Inv*ACF)	$21,367
11. PERCENT ASSIGNED TO LOCAL	SIS-PC	0.757354
12. ANNUAL COST OF INTERCEPT MILEAGE	L10*L11	$16,182

AMERITECH MICHIGAN

UNBUNDLED PORT
INTERCEPT CXR TERMINATIONS

1. AUTOMATIC INTERCEPT TRUNKS	ENGR STUDY	2,770
2. NO. OF CXR TERMINATIONS	2*L1	5,540
3. INVESTMENT PER TERMINATION	FIC STUDY, L14	$504.28
4. ANNUAL COST FACTOR 357C		0.3137
5. TOTAL ANNUAL COST	L2*L3*L4	$876,387
6. PERCENT ASSIGNED TO LOCAL	SIS-PC	0.757354
7. INTERCEPT COST ASSIGNED LOCAL	L5*L6	$663,735

AMERITECH MICHIGAN

UNBUNDLED PORT
INTERCEPT COE SWITCHING EQUIPMENT

A. 2200 CAT 1Q0 (FRC 117C) $807,396
    (04/95 SIS-PC, SEC A-1, P.1 OF 1, LINE 8I)

B. 117C CC/BC FACTOR (1994)   1.009

C. 117C CURRENT INVESTMENT (1994)   A*B $814,663

D. 117C TPI FACTOR 96/94   0.994

E. 117C INVESTMENT (1996)   D*C $809,775

F. 117C ANNUAL COST FACTOR   0.3122

G. 117C INTERCEPT ANNUAL COST   F*E $252,812

SPNP - DIRECT NONRECURRING COSTS
MICHIGAN

A Work Group Per DID		B Activity	C Installation/ Removal Estimate (Hrs)	D 1997 Labor Rate Per Hour	E=C*D Total Installation/ Removal Expense	
1) Business Unit (per order)	a	Log Order	0.083	$32.12	$2.68	
- for VG and DS1 w/ and w/o transport	b	Pull CSR, Verify Request	0.167	$32.12	$5.35	
(A/C = M236X Wisc only)	c	Call Business Office to issue C order	0.042	$32.12	$1.34	
	d	Input into Ordermate	0.167	$32.12	$5.35	
	e	Issue SPS order for NAC	0.167	$32.12	$5.35	
	f	Contact CTG for info	0.083	$32.12	$2.68	
	g	Retrieve Order & Account #'s	0.083	$32.12	$2.68	
	h	Input into Ordermate	0.167	$32.12	$5.35	
	i	Issue SPS for CTG & NAC	0.250	$32.12	$8.03	
	j	Machine cost			$3.75	
location life = 1 year	k	Disconnect Order PV=11.5%COM	0.250	$33.47	$7.50	
	l	Machine cost PV=11.5%COM			$3.36	
	m	Total				$53.42
2) Business Office (per order)	a	Type Order	0.250	$40.36	$10.09	
(A/C = M236X)	b	Contact Time	0.167	$40.36	$6.73	
	c	Issue Order	0.250	$40.36	$10.09	
	d	Machine cost			$3.75	
	e	Total				$30.66
3) Unbundling Center (per trunk)	a	Pre-service Set-up	0.250	$41.32	$10.33	
(A/C = P475X Wisc only)	b	Verify and Release Order	0.167	$41.32	$6.89	
	c	Reverify and Close Order	0.083	$41.32	$3.44	
	d	Disconnect Order PV=11.5%COM	0.083	$43.05	$3.22	
	e	Total				$23.88
4) Centralized Translations Group (CTG)	a	Build Route Index per Trunk Group	0.333	$43.65	$14.54	
(A/C = P430X)	b	Disconnect Order PV=11.5%COM	0.167	$45.48	$6.81	
	c	Total				$21.35
	d	Assign Trunk Members per Trunk	0.167	$43.65	$7.29	
	e	Disconnect Order PV=11.5%COM	0.083	$45.48	$3.39	
	f	Total				$10.68
5) Recent Change Memory Admin. Center	a	Assign Directory Numbers per No.	0.033	$43.65	$1.46	
(RCMAC)	b	Rearrangement per line	0.025	$43.65	$1.09	
(A/C = P430X)						
	c	Total				$2.55
6) Network Administration Center (NAC) (per number) (A/C = M270X)		Provide assignment	0.017	$40.75	$0.68	
7) USOC Implementation (per Trunk Group)					$35.18	
8) SERVICE ORDERING		(L1m + L2e)	$84.08			
9) TOTAL PER TRUNK GROUP		(L4c + L7)	$56.53			
10) TOTAL PER DS0 TRUNK TERMINATION		(L4f + L3e)	$34.56			
11) TOTAL PER DS1 TRUNK TERMINATION		((L4f *24) + L3e)	$280.20			
12) TOTAL PER NUMBER		(L5c + L6)	$3.23			
13) SUBSEQUENT CHANGES		L4c	$21.35			

Handwritten annotations:

- 8) SERVICE ORDERING: = 53.42 + 30.66
- 9) TOTAL PER TRUNK GROUP: = 21.35 + 35.18
- 10) TOTAL PER DS0 TRUNK TERMINATION: = 10.68 + 23.88
- 11) TOTAL PER DS1 TRUNK TERMINATION: = (10.68 x 24) + 23
- 12) TOTAL PER NUMBER: = 2.55 + .68

14 Non Volume Sensitive Cost per Trunk Group = 1.25
15 " " " " " " DS0 Trunk Termination = .77
16 " " " " " " DS1 Trunk Termination = 6.85
17 " " " " " " Number = ...
18 " " " " " Subsequent Changes = .47

SS7 / STP ACCESS

Ameritech - Michigan

PRODUCT	TYPE	MONTHLY RECURRING COSTS				NONRECURRING CHARGE			
		TELRIC	SHARED COSTS	COMMON COSTS	TOTAL COSTS	TELRIC	SHARED COSTS	COMMON COSTS	TOTAL COSTS
SS7/STP	Port Termination - (For Both ISUP/TCAP msgs)	263 73	45 00	25 48	334 21	486 73	83 04	47 02	616 79
Access	Signal Switching/ISUP msg	0 000118	0 000020	0 000011	0 000149				
	Signal Transport/ISUP msg	0 000045	0 000008	0 000004	0 000057				
	Signal Formulation/ISUP msg	0 000683	0 000117	0 000066	0 000866				
	Signal Tandem Switching/ISUP msg	0 000202	0 000035	0 000020	0 000257				
	Signal Switching/TCAP msg	0 000101	0 000017	0 000010	0 000128				
	Signal Transport/TCAP msg	0 000030	0 000005	0 000003	0 000038				
	Signal Formulation/TCAP msg	0 000408	0 000070	0 000039	0 000517				
	Orig Point Code/per svc added or changed					18 40	3 14	1 78	23 32
	Global-Title Address Trans per svc added/changed					9 89	1 69	0 96	12 54

ISUP

Signaling Link		COST	NON VOLUME SENSITIVE
1 STP Port termination	WP-2,L24	243.69	20.04
2 Signal Switching	WP-2,L8+L23+L53	0.00010918	0.000009
3 Signal Transport	WP-2,L11	0.00004162	0.000003
4 Signal Formulation	WP-2,L7	0.00063096	0.000052
5 Signal Tandem Switching	WP-2,L20+L23+L26	0.00018707	0.000015

TCAP

Signaling Link			
6 STP Port termination	WP-2,L24	243.69	20.04
7 Signal Switching	WP-3,L34WP-2+L42+L53	0.00009292	0.000008
8 Signal Transport	WP-3,L37	0.00002808	0.000002
9 Signal Formulation	WP-3,L33	0.00037690	0.000031

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ISUP

Message Formulation

Michigan

1	Average SSP Cost Per Message	0.00034703
2	Percent Local Traffic	100%
3	Local Cost Per Message	$ 0.000347
4	Average Tandem Cost Per Message	$ 0.000784
5	Percent Tandem Routed Traffic	36.23%
6	Cost Per Tandem Message	$ 0.000284
7	Total Message Formulation Cost	$ 0.000631

Message Switching

8	Cost Per Message	0.0000490

Non Traffic Sensitive Costs

9	Cost Per A Link Message	0.00000291
10	Cost Per STP Port Message	0.00003871
11	Link Cost Per Message	0.00004162

Message Tandem Switching

12	Tandem Message Switching Cost	0.00008267
13	Cost Per 2 Links	$ 0.0000832
14	Percent Routed over 2 links	2.44%
15	Weighted Cost Per Message	$ 0.000002
16	Cost Per Three Links	$ 0.0001249
17	Percent Routed over 3 links	33.78%
18	Weighted Cost Per Message	$ 0.000042
19	Total Link Cost Per Message	$ 0.000044
20	Total Message Tandem Switching Cost	$ 0.000127

Usage Measurement Equipment

21	Total Annual Unisys/DACs Costs	1311816.98
22	Total Annual ISUP & TCAP Messages	22261053051
23	Total Cost Per Message	0.00005893

Monthly Cost Per STP Port

24	Cost Per STP Port	243.69

Billing

25	CABS/CAMPS Development costs	28109.06
26	Cost per message	0.00000126

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Message Formulation

Michigan

27	Average SSP Cost Per Message	0.00036319
28	Percent Local Traffic	63.77%
29	Local Cost Per Message	$ 0.000232
30	Average Tandem Cost Per Message	0.00040104
31	Percent Tandem Routed Traffic	36.23%
32	Cost Per Tandem Message	$ 0.000145
33	Total Message Formulation Cost	$ 0.000377

Message Switching

34	Cost Per Message	0.00003273

Non Traffic Sensitive Costs

35	Cost Per A Link Message	0.00000196
36	Cost Per STP Port Message	0.00002612
37	Link Cost Per Message	0.00002808

Message Tandem Switching

38	Tandem Message Switching Cost	0.00005577
39	Cost Per 2 Links	$ 0.0000562
40	Percent Routed over 2 links	2.44%
41	Weighted Cost Per Message	$ 0.000001
42	Cost Per Three Links	$ 0.0000842
43	Percent Routed over 3 links	33.78%
44	Weighted Cost Per Message	$ 0.000028
45	Total Link Cost Per Message	$ 0.000030
46	Total Message Tandem Switching Cost	$ 0.000086

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